

# C-A OPERATIONS PROCEDURES MANUAL

## **2.21 Modification of Nationally Recognized Test Laboratory Listed Equipment**

### **1. Procedure**

This procedure provides instructions to C-A personnel for modifying National Recognized Test Laboratory (NRTL) listed equipment for use at the C-AD.

### **2. Responsibility**

- 2.1 Modifying equipment which is listed by a NRTL may invalidate the listing.
- 2.2 Before performing any such modifications the personnel responsible for the equipment shall request a design review from either the C-AD Chief Mechanical or Chief Electrical Engineer. It shall be the Chief Engineer's prerogative to determine if a design review is required or if the modification is of such a nature that no further review is necessary. The Chief Engineers decision shall be formally documented.
- 2.3 If the Chief Electrical Engineer believes a design review is warranted for electrical equipment, he or she shall notify the Laboratory Electrical Safety Officer (LESO) of that finding.
- 2.4 It is the responsibility of the person or group proposing the modification to obtain engineering documentation or calculations to verify that making the proposed modification does not compromise the safety aspects of the equipment.
- 2.5 No review is necessary for a "change in kind".
- 2.6 Once the modifications have been made it is the responsibility of the person or group requesting the modification that the equipment be inspected by an Electrical Equipment Inspector and certified as acceptable for use, before the equipment is put into operations.

### **3. Prerequisites**

None

### **4. Precautions**

- 4.1 All new equipment must be purchased with an NRTL listing if possible. NRTL listed equipment should be purchased with required modified made by the manufacture if possible.
- 4.2 If existing equipment is to be modified, the manufacturer should be contacted to review the modification.

## **5. Procedure**

- 5.1 Before modifying any NRTL listed equipment it is preferable to obtain approval from the equipment manufacturer. If this is not possible, an engineering review or approval by the Chief Engineer shall be requested. Such a review may include calculations showing that the safety aspects of the equipment will not be compromised by the modification.
- 5.2 Either the review or the approval by the Chief Mechanical or Electrical Engineer shall be documented.
- 5.3 The group or person requesting the modification must then have the modified equipment inspected by an Electrical Equipment Inspector (EEI). It must be certified as acceptable before it is put into service.

## **6. Documentation**

- 6.1 If possible, documentation from the equipment manufacturer showing that the modification does not compromise the safety aspects of the equipment.
- 6.2 The Chief Engineers approval of the equipment or request for a design review.
- 6.3 If a design review is required, notification to the LESO.
- 6.4 The results of the design review, if required.
- 6.5 Documentation of an EEI inspection approving use of the modified equipment.

## **7. References**

- 7.1 DOE Type B Accident Investigation Board Report, *Arc Flash at Brookhaven National Laboratory, April 14, 2006*, Dated August 2006.

## **8. Attachments**

None